



**Project name:** Denver RTD  
Efficient Boilers at Boulder

**Transit agency:** Denver Regional  
Transportation District (Denver RTD)

**Location:** Boulder, Colorado

**TIGGER goal:** Energy reduction

**FTA region number:** VIII

**Award amount:** \$325,000

**Congressional district:**  
CO-1, CO2, CO-4, CO-6, CO-7

**Funding mechanism:**  
Recovery Act (ARRA)

## ***Boulder Boilers Boost Efficiency for Denver RTD***

With a \$325,000 TIGGER Program grant, the Denver Regional Transportation District (RTD) is replacing the outdated heating system at its 170,000 square foot Boulder, Colorado maintenance facility with new, high-efficiency boilers. This energy-efficiency upgrade is part of a larger Energy Enhancements Yielding Operational Returns and Efficiency (EEYORE) project at Denver RTD.

RTD is replacing the two existing boilers with four high-efficiency hot water boilers that also include clean burning technology to reduce nitrogen oxide (NOx) emission levels compared to the current level. These new boilers also use an advanced, integrated control system for improved climate control—the boilers can be set to turn on and off based on the outside air temperature.

Installing these energy-efficient boilers will reduce greenhouse gas emissions and improve energy efficiency at the Boulder maintenance facility. Currently, the facility's boilers consume more than



**Denver Regional Transportation District (RTD)** is a regional transit authority that has been providing transit services to eight counties throughout the Denver-Aurora-Boulder region of central Colorado for more than 40 years. Denver RTD currently operates a total of 165 fixed routes, with 1,039 fixed-route buses and 117 light rail vehicles, and employs more than 4,000 direct and contracted employees.

Courtesy of RTD



New high-efficiency hot water boilers at RTD's Boulder maintenance facility in Boulder, Colorado will replace these older Burnham boilers.

20,000 million Btu of natural gas per year, operating at an overall efficiency of around 82% with NOx emissions of 45 ppm. The new boilers can achieve overall efficiency of 90%–93% and reduce NOx emissions to 20 ppm.

RTD anticipates that the high-efficiency boiler system will save 10,286 million Btu per year of operation. This energy savings will reduce the Boulder facility's natural gas consumption by 51% and overall energy consumption by 33%. Over the expected 25-year life of the boiler, RTD will save \$72,000 per year, based on current natural gas prices.

**Impact:**

The high-efficiency boiler upgrades will reduce the annual energy consumption at RTD's Boulder facility by 33%, saving RTD \$72,000 per year.

**About TIGGER**

**The Transit Investment for Greenhouse Gas and Energy Reduction (TIGGER) Program** was established in 2009 by the U.S. Department of Transportation's Federal Transit Administration (FTA). Designed to reduce energy use and greenhouse gas emissions in transit agencies around the country, the TIGGER Program made funds available for capital investments that would reduce greenhouse gas emissions or lower the energy use of public transportation systems. An initial \$100 million in American Recovery and Reinvestment Act grants funded 43 competitively-selected transit projects. In 2010, the FTA provided an additional \$75 million in grants to fund 27 new TIGGER projects. These 70 projects are employing a variety of technologies to meet the program goals, including solar installations, building efficiency improvements, wind technology, wayside energy storage for rail, and purchase of more efficient buses. In fiscal year 2011, FTA provided an additional \$49.9 million to continue the program.

**For More Information**

Denver RTD:

[www.rtd-denver.com](http://www.rtd-denver.com)

FTA TIGGER:

[www.fta.dot.gov/TIGGER](http://www.fta.dot.gov/TIGGER)



U.S. Department of Transportation  
Federal Transit Administration  
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